

CLAIMS

We claim:

- 1 1. A method of activating and authenticating a wireless device in a secondary
2 wireless communication system co-located with a primary wireless communication
3 system, the method comprising:
4 masking the control and activation signal strength associated with the primary
5 wireless communication system; and
6 coupling control and activation signals of the secondary wireless communication
7 system to the wireless device during the masking.
- 1 2. The method of claim 1, wherein:
2 masking the control and activation signal strength further comprises devising an
3 activation and control signal of the secondary wireless communication system so that it
4 exceeds in magnitude the activation and control average signal strength of the primary
5 wireless communication system as masked within defined spatial limits; and
6 coupling control and activation signals further comprises operating the wireless
7 device for activation purposes within the defined spatial limits.
- 1 3. The method of claim 1, wherein coupling control and activation signals further
2 comprises generating control and activation responses mimicking control and activation
3 scenarios of an interaction with the co-located wireless communication system.
- 1 4. The method of claim 1, wherein:
2 masking further comprises blocking radiation of the higher activation and control
3 average signal strength within a limited space at which the wireless device couples with
4 activation and control signals.
- 1 5. The method of claim 1, wherein:

2 masking further comprises directionally controlling control and activation signal
3 radiation of the secondary wireless communication system.

1 6. The method of claim 1, wherein:

2 coupling further comprises providing both analog and digital control and
3 activation signals.

1 7. The method of claim 2, wherein the activation and control signal of the
2 secondary wireless communication system operates at identical frequencies used by the
3 control and activation average signal strength of the co-located wireless communication
4 system.

1 8. The method of claim 1, wherein the secondary wireless communication system is
2 a private local communication system.

1 9. The method of claim 8, wherein the primary wireless communication system is
2 dominant wireless communication system.

1 10. The method of claim 9, wherein the primary wireless communication system
2 operate at a higher control and activation average signal strength.

1 11. A secondary wireless communication system overlapped by a primary wireless
2 communication system, and including radio access for activation and authentication of a
3 wireless device in the secondary wireless communication system, the secondary wireless
4 communication system comprising:

5 an automated private service activation (APSA) port for accepting access requests
6 of a wireless device seeking activation in the secondary wireless communication system,
7 the APSA port radiating access control channel signals within limited spatial constraints;
8 and

9 a localized space for operating the secondary wireless communication system for
10 wireless devices activated by the APSA port.

1 12. The secondary wireless communication system of claim 11, wherein the APSA
2 port provides the access control channel radiating signals at a level exceeding a signal
3 level of the secondary wireless communication system only within limited spatial
4 constraints.

1 13. The secondary wireless communication system of claim 11, wherein the APSA
2 port is part of a base station having both analog communication channels and digital
3 communication channels.

1 14. The secondary wireless communication system of claim 11, wherein the APSA
2 port comprises a surface covering an antenna for placing a wireless device in proximity to
3 the surface to achieve access and authentication, wherein the access control channel
4 radiated signal exceeds a control channel signal level of the primary wireless
5 communication system.

1 15. The secondary wireless communication system of claim 11, wherein the APSA
2 port further includes an antenna accessible to a wireless device seeking access and
3 authentication that includes shielding that blocks a control signal level of the overlapping
4 primary wireless communication system.

1 16. The secondary wireless communication system of claim 11, wherein the primary
2 wireless communication system is a dominant wireless communication system over the
3 secondary communication system.

1 17. A method of accessing and achieving authentication from a secondary wireless
2 communication system in a region overlapped by a dominant wireless communication
3 system, the method comprising:
4 creating an access signal space in which radiated access control signal levels of the
5 secondary wireless communication system within the access signal space exceed access
6 control signal levels of the dominant wireless communication system;
7 receiving a wireless device seeking access to the secondary wireless
8 communication system within the access signal space;
9 receiving a search from the wireless device for a strongest control channel;
10 selecting the control channel of the secondary wireless communication system by
11 reason of the proximity of the wireless device within the access space; and
12 authorizing and authenticating the wireless device for operation within the
13 secondary wireless communication system.

1 18. The method of claim 17, further comprising:
2 enabling the secondary wireless communication system to interwork with the
3 dominant wireless communication system.

1 19. The method of claim 17, further comprising:
2 billing service while in the secondary wireless communication system through the
3 dominant wireless communication system.

1 20. The method of claim 17, wherein the wireless device receives a number
2 associated with the wireless device and service provider information in advance of
3 accessing the secondary wireless communication system for allowing administration of
4 services within the secondary wireless communication system.